# UNITED STATES PATENT AND TRADEMARK OFFICE

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/846,849 | 05/02/2001 | Alejandro Schwartzman | CISCP203 | 5618 |

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| EXAMINER |
|---|
| USTARIS, JOSEPH G |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2617 | |

DATE MAILED: 01/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

| | Application No. | Applicant(s) |
|---|---|---|
| **Office Action Summary** | 09/846,849 | SCHWARTZMAN ET AL. |
| | Examiner | Art Unit | |
| | Joseph G. Ustaris | 2617 | |

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>02 November 2005</u>.

2a)☐ This action is FINAL.     2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-63</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-63</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 May 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

# DETAILED ACTION

## *Response to Amendment*

1.      This action is in response to the amendment dated 02 November 2005 in

application 09/846,849. Claims 1-63 are pending. No claims are amended.

Applicant's arguments, see pages 8 and 9, filed 02 November 2005, with respect

to the rejection(s) of claim(s) 1-63 under 103(a) have been fully considered and are

persuasive.  Therefore, the rejection has been withdrawn.  However, upon further

consideration, a new ground(s) of rejection is made in view of new prior art Quigley et

al. (US006785564B1).

## *Claim Rejections - 35 USC § 103*

2.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4-7, 9-19, 21-29, 31-34, 36-39, 41-50, 52-60, 62, and 63 are rejected

under 35 U.S.C. 103(a) as being unpatentable over Chiu et al. (US005883901A) in view

of Quigley et al. (US006785564B1).

Regarding claim 1, Chiu et al. (Chiu) discloses a system for disabling and

enabling receiver circuitry in a cable modem connected to a headend in a cable modem

network (See Fig. 1; column 5 lines 20-34, column 11 lines 44-54, and column 12 lines

45-51). The signal conversion system (SCS) at the headend "transmits a first message

with first instructions from the headend to the cable modem to disable the cable modem

receiver circuitry" (See column 12 lines 45-51). The SCS of the headend "sets an

indication of the cable modem receiver circuitry state to disabled" within the control

frame subtype (See column 11 lines 44-54 and column 12 lines 45-51). Furthermore,

the SCS at the headend can "transmit a second message with second instructions from

the headend to enable the cable modem receiver circuitry" (See column 12 lines 45-51).

The SCS of the headend also "sets the indication of the cable modem receiver circuitry

state to enabled" within the control frame subtype (See column 11 lines 44-54 and

column 12 lines 45-51). However, Chiu does not disclose disabling the cable modem for

periodic intervals separated by activation windows, where any message received during

a period outside the activation window is ignored.

Inherently, while a cable modem is disabled, it no longer fully functions.

Quigley et al. (Quigley) discloses a cable modem system that is able to control cable

modems (See Fig. 1). The cable modem termination system (CMTS) at the headend is

able to periodically or "period intervals" disable forward tuning and demodulation circuits

or "receiver circuitry" of the cable modems within the system when the cable modem

report periods of inactivity. The portions of times when the cable modem is in active

state or enabled is considered the "activation window", wherein the times the cable

modem is enabled separates the "periodic intervals" of when the cable modem is in

standby state or disabled. When the cable modem is in standby state or disabled, any

signals received are ignored or "messages received during a period outside the

activation window is ignored". However, any signals received while the cable modem is

not disabled or "within the activation window" will be processed (See column 4 line 25 –

column 5 line 42). Therefore, it would have been obvious to one with ordinary skill in the

art at the time the invention was made to modify the SCS at the headend and cable

modem disclosed by Chiu to be able to disable the cable modem for periodic intervals

where any message received during a period outside the activation window is ignored,

as taught by Quigley, in order to provide a more efficient means of controlling the state

of the cable modem thereby providing a better power management system that reduces

the power consumption of the cable modems without introducing significant latency.

Regarding claim 2, the disable message is a "unicast SYNCH message", wherein

the message is directed to a particular cable modem (See column 8 lines 9-20 and

column 12 lines 45-51).

Regarding claim 4, the enable message is also a "unicast SYNCH message",

wherein the message is directed to a particular cable modem (See column 8 lines 9-20

and column 12 lines 45-51).

Regarding claim 5, Chiu in view of Quigley discloses that various time periods

can be defined for when the receiver is enabled or disabled based on the predetermined

sleep interval (See Quigley column 4 line 25 – column 5 line 42).

Official Notice is taken that is well known schedule an "activation window" for any

amount of time (e.g. 100 milliseconds). Therefore, it would have been obvious to one

with ordinary skill in the art at the time the invention was made to modify the "activation

window" disclosed by Chiu in view of Quigley to be any amount of time (e.g. 100

milliseconds) in order to provide more options for the system to protect the access to the network.

Regarding claim 6, Chiu in view of Quigley discloses that various time periods can be defined for when the receiver is enabled or disabled based on the predetermined sleep interval (See Quigley column 4 line 25 – column 5 line 42).

Official Notice is taken that is well known schedule the "periodic intervals" for any amount of time (e.g. 10 seconds). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the "periodic intervals" disclosed by Chiu in view of Quigley to be any amount of time (e.g. 10 seconds) in order to provide more options for the system to protect the access to the network.

Regarding claim 7, when the cable modem is disabled for the "periodic intervals", inherently received messages are ignored as discussed in claim 1 above.

Regarding claim 9, when the cable modem is disabled for the "periodic intervals", inherently the transmitter circuitry is also disabled.

Regarding claim 10, inherently, when the cable modem is disabled, the transmitter circuitry is also disabled as discussed in claim 9 above. Therefore, no messages are transmitted from the cable modem to the headend.

Claim 11 contains the limitations of claim 1 (wherein the cable modem receives the commands and disables/enables the cable modem according to the instructions within the messages) and is analyzed as previously discussed with respect to that claim.

Claim 12 contains the limitations of claims 2 and 11 and is analyzed as previously discussed with respect to those claims.

Regarding claim 13, Chiu in view of Quigley discloses that the cable modem has a tuner (See Fig. 3, tuner 303). However, Chiu in view of Quigley does not explicitly disclose that the tuner includes an RF amplifier, a mixer, a phase lock loop, and an IF amplifier.

Official Notice is taken that it is well known for tuners to include an RF amplifier, a mixer, a phase lock loop, and an IF amplifier. Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the tuner of the cable modem disclosed by Chiu in view of Quigley to include an RF amplifier, a mixer, a phase lock loop, and an IF amplifier in order to provide a more efficient tuner thereby enhancing the performance of the tuner.

Regarding claim 14, the receiver further comprises a demodulator (See Chiu column 17 lines 7-10).

Regarding claim 15, the cable modem receiver further comprises one or more processors coupled with memory (See Chiu Fig. 3, microprocessor 302 and memory 309).

Claim 16 contains the limitations of claims 4 and 11 and is analyzed as previously discussed with respect to those claims.

Claim 17 contains the limitations of claims 5 and 11 and is analyzed as previously discussed with respect to those claims.

Claim 18 contains the limitations of claims 6 and 17 and is analyzed as previously discussed with respect to those claims.

Claim 19 contains the limitations of claims 7 and 11 and is analyzed as previously discussed with respect to those claims.

Claim 21 contains the limitations of claims 9 and 11 and is analyzed as previously discussed with respect to those claims.

Claim 22 contains the limitations of claims 10 and 11 and is analyzed as previously discussed with respect to those claims.

Claim 23 contains the limitations of claim 1 (where inherently the SCS of the headend executes a computer program that has program instructions on a machine readable medium) and is analyzed as previously discussed with respect to that claim.

Claim 24 contains the limitations of claims 2 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 25 contains the limitations of claims 4 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 26 contains the limitations of claims 5 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 27 contains the limitations of claims 6 and 23 and is analyzed as previously discussed with respect to those claims.

Claim 28 contains the limitations of claim 1 (wherein the headend transmits the messages) and is analyzed as previously discussed with respect to that claim.

Furthermore, the headend has memory and one or more processors (See Chiu Fig. 2,

CPU 209 and RAM).

Claim 29 contains the limitations of claims 2 and 28 and is analyzed as

previously discussed with respect to those claims.

Claim 31 contains the limitations of claims 4 and 28 and is analyzed as

previously discussed with respect to those claims.

Claim 32 contains the limitations of claims 5 and 28 and is analyzed as

previously discussed with respect to those claims.

Claim 33 contains the limitations of claims 6 and 28 and is analyzed as

previously discussed with respect to those claims.

Claim 34 contains the limitations of claims 7 and 28 and is analyzed as

previously discussed with respect to those claims.

Claim 36 contains the limitations of claims 9 and 28 and is analyzed as

previously discussed with respect to those claims.

Claim 37 contains the limitations of claims 10 and 28 and is analyzed as

previously discussed with respect to those claims.

Claim 38 contains the limitations of claim 11 (wherein the cable modem or

"apparatus" has a transmitter, memory, one or more processors, and a receiver (See

Chiu Fig. 3)) and is analyzed as previously discussed with respect to that claim.

Claim 39 contains the limitations of claims 12 and 38 and is analyzed as

previously discussed with respect to those claims.

Claim 41 contains the limitations of claims 16 and 38 and is analyzed as previously discussed with respect to those claims.

Claim 42 contains the limitations of claims 13 and 38 and is analyzed as previously discussed with respect to those claims.

Claim 43 contains the limitations of claims 14 and 42 and is analyzed as previously discussed with respect to those claims.

Claim 44 contains the limitations of claims 15 and 43 and is analyzed as previously discussed with respect to those claims.

Claim 45 contains the limitations of claims 1 and is analyzed as previously discussed with respect to that claim.

Claim 46 contains the limitations of claims 2 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 47 contains the limitations of claims 4 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 48 contains the limitations of claims 5 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 49 contains the limitations of claims 6 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 50 contains the limitations of claims 7 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 52 contains the limitations of claims 9 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 53 contains the limitations of claims 10 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 54 contains the limitations of claim 11 and is analyzed as previously discussed with respect to that claim.

Claim 55 contains the limitations of claims 12 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 56 contains the limitations of claims 13 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 57 contains the limitations of claims 14 and 56 and is analyzed as previously discussed with respect to those claims.

Claim 58 contains the limitations of claims 15 and 57 and is analyzed as previously discussed with respect to those claims.

Claim 59 contains the limitations of claims 16 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 60 contains the limitations of claims 19 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 62 contains the limitations of claims 21 and 54 and is analyzed as previously discussed with respect to those claims.

Claim 63 contains the limitations of claims 22 and 54 and is analyzed as previously discussed with respect to those claims.

Claims 3, 30, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al. (US005883901A) in view of Quigley et al. (US006785564B1) as applied to claims 1, 2, 4-7, 9-19, 21-29, 31-34, 36-39, 41-50, 52-60, 62, and 63 above, and further in view of Brusaw (US005523781A).

Regarding claim 3, Chiu in view of Quigley does not explicitly disclose that the messages contain periodic intervals and activation window information.

Brusaw discloses a system for controlling a television by using control messages (See column 3 line 63 – column 4 line 2). Brusaw discloses that the messages can contain times or "periodic intervals and activation window information" of when certain commands are to be executed (See column 10 line 66 – column 11 line 10). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the messages disclosed by Chiu in view of Quigley to include periodic intervals and activation window information, as taught by Brusaw, in order to provide a more efficient means of transporting various commands and command attributes to and from the headend and cable modem.

Claim 30 contains the limitations of claims 3 and 29 and is analyzed as previously discussed with respect to those claims.

Claim 40 contains the limitations of claims 3 and 39 and is analyzed as previously discussed with respect to those claims.

Claims 8, 20, 35, 51, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiu et al. (US005883901A) in view of Quigley et al.

(US006785564B1) as applied to claims 1, 2, 4-7, 9-19, 21-29, 31-34, 36-39, 41-50, 52-60, 62, and 63 above, and further in view of Wall et al. (US 20030037160A1).

Regarding claim 8, Chiu in view of Quigley does not disclose that the cable modem ignores multicast messages during an "activation window".

Wall et al. (Wall) discloses a system that is able to control the entry of data to a network environment. Wall discloses that some network nodes are configured to automatically ignore multicast messages (See paragraph 0018). Therefore, it would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the cable modem disclosed by Chiu in view of Quigley to be configured to ignore multicast messages, as taught by Wall, in order to provide a more secure and bandwidth efficient connection to the network.

Claim 20 contains the limitations of claims 8 and 11 and is analyzed as previously discussed with respect to those claims.

Claim 35 contains the limitations of claims 8 and 28 and is analyzed as previously discussed with respect to those claims.

Claim 51 contains the limitations of claims 8 and 45 and is analyzed as previously discussed with respect to those claims.

Claim 61 contains the limitations of claims 20 and 54 and is analyzed as previously discussed with respect to those claims.

## *Response to Arguments*

3.      Applicant's arguments with respect to claims 1-63 have been considered but are

moot in view of the new ground(s) of rejection.


## *Conclusion*

4.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Joseph G. Ustaris whose telephone number is 571-272-

7383.  The examiner can normally be reached on M-F 7:30-5PM; Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Christopher S. Kelley can be reached on 571-272-7331.  The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system.  Status information for

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

JGU
January 10, 2006

VIVEK SRIVASTAVA
PRIMARY EXAMINER